

File Ac, '045/010

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MR Form 3
(Revised 1984)

FEB 27 1985

DIVISION OF OIL
GAS & MINING

ANNUAL OPERATIONS AND PROGRESS REPORT

From Month/Year _____
to Month/Year _____

(To be submitted for each mining operation at the end of each calendar year to the Division at this address:)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
(801) 538-5340

OPERATOR: McFarland and Hullinger MINE NAME: Crystal Mine

ADDRESS: P. O. Box 238, Tooele, Utah 84074

PERMIT NUMBER AND DATE OF PERMIT: ACT/045/010

REPRESENTATIVE: Mark H. Crystal

SECTION(S): 7-12 TOWNSHIP(S): 6 South RANGE(S): 3 & 4 West, SLBM

MINERAL(S) MINED: Limestone

STATE AND/OR FEDERAL MINERAL LEASE NUMBERS: _____

SPECIAL USE PERMITS AND/OR RIGHTS-OF-WAY: No

Section 40-8-15 and Rule M-8 of the Utah Mined Land Reclamation Act, requires each operator to include with this report an up-dated map and plan prepared in accordance with Rule M-3, as outlined in the requirements for annual report maps in Appendix I, providing a detailed status of all mining and reclamation activities which have occurred during the past year.

The report should include:

MINING:

(a) Tabulation of acreage disturbed (by pits, roads, facilities, etc.) during the report period with illustration on a current map.

<u>Disturbance</u>	<u>Acreage</u>
Pit	_____
Roads	_____
Facilities	_____
Waste Dumps	_____
Other	_____

(b) Tabulation of acreage affected to date (by years).

<u>Date by Year</u>	<u>Acreage (Total</u>
1975	_____
1976	_____
1977	_____
1978	_____
1979	_____
1980	_____
1981	_____
1982	_____
1983	_____

(c) Tabulation of all topsoil (new) stockpile volumes (see chart below) and date of stockpiling.

SOIL TABULATION CHART

	<u>Area</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>etc.</u>
Area Affected (in mining sequence) (If more space is needed, please attach.)				
Acreage of Area	_____			
Depth of Topsoil Removal (inches)	_____			
Depth of Topsoil Replacement (inches)*	_____			
Estimate of Topsoil Volume Salvaged (yd ³ or ac ft)	_____			
Volume Actually Salvaged (yd ³ or ac ft)	_____			
Volume Required for Reclamation (yd ³ or ac ft)	_____			
Surplus or Deficit Volume (yd ³ or ac ft)	_____			
Storage Status (short- or long-term)	_____			

Soil Tabulation Chart (continued)

Area Affected (in mining sequence)	Area			
	1	2	3	etc.
Storage Location				
Area Where Soil Has Been Used (if not stored)				
Running Total (all stockpiles) (yd ³ or ac ft)				
Short-term				
Long-term				

*Of previously stripped area recently reclaimed.

(d) Tabulation of all (newly removed) out-of-pit spoil volumes, date of placement and illustration on a map.

<u>Area</u>	<u>Date</u>	<u>Acreage</u>

(e) Tabulation of quantity of commodity mined.

	<u>Commodity</u>	<u>Tonnage</u>
(Mined)		
(Milled)		

(f) Description of any new construction during the report period with illustration on a map, including, but not limited to:

1. Buildings and support facilities.

2. Roads.

3. Diversion ditches, collector ditches, interceptor ditches, etc.

4. Culverts.

5. Sediment ponds, containment ponds.

6. Monitoring sites (vegetative, air quality, surface subsidence, surface water or ground water, etc.).

7. Topsoil stockpiles.

(g) Description of any environmental problem areas with a proposed plan for mitigation and illustration on a map, including, but not limited to:

1. Pit stability problems.

2. Subsidence.

3. Accidental water discharge, dam failure, etc.

4. Slumping, sliding or erosion.

5. Revegetation problem areas.

6. Existence and location of unsuitable (toxic) overburden.

RECLAMATION:

(a) Tabulation of the acreage reclaimed during the report period with illustration on a map, distinguishing between:

1. Backfilled, graded and contoured areas.

Area

Acreage

Area affected was reseeded in the fall of 1983 - No results available yet.

2. Topsoiled areas.

Area

Acreage

3. Seeded areas.

<u>Area</u>	<u>Acreage</u>

4. Reseeded areas (areas previously seeded, then seeded again).

<u>Area</u>	<u>Acreage</u>

(b) Tabulation of total acreage reclaimed (seeded with permanent seed mix) to date by years with illustration on an updated map:

<u>Year</u>	<u>Acreage</u>
1975	
1976	
1977	
1978	
1979	
1980	
1981	
1982	
1983	
1984	

(c) Description of the reclamation procedures used during the report period, including:

1. Average depth of topsoil applied.

2. Type of seed (species) used for seeding during the report period.

3. Date of seeding during the report period.

Spring _____

Fall _____

4. Seeding procedures used.

(Hand broadcast or drilled or any other).

5. Rate of seed application.

Pounds Per Acre of Pure Live Seed (PLS) (if varied, please explain)

6. Type and rate of fertilizer applied.

7. Type and rate of mulch applied.

8. Rate of irrigation water applied, if any. Please describe any type of sprinkling, or water applied (water truck, etc.).

9. Revegetation test plot information.

(Cover, density, productivity, etc.)

10. Soil analysis results.

(d) Description of results of previous revegetation efforts, including:
(This should be done as applicable.)

1. Types (species) of seed that have germinated and are growing.

2. Types (species) of seed that are not growing successfully.

3. Areas experiencing problems with weeds and weed types.

4. Significant erosional problems.

5. Areas of unsuitable overburden on the surface as related to
revegetation failure.

6. Procedures used or proposed to correct these problems.

7. Acreage and dates of release (upon inspection by the State) of revegetated areas.

<u>Area</u>	<u>Date</u>	<u>Acreage</u>

8. Results of soil analysis.

(e) Summarization of the reclamation costs incurred during the report period, including itemized costs for each operation (i.e., grading, topsoil replacement, seeding, etc.) and for each type of disturbance (i.e., spoil, haul roads, facilities removal, etc.) on a per acre basis.

	<u>Acres</u>	<u>Cost/Acre</u>
1. Grading		
2. Backfilling		
3. Contouring		
4. Topsoil Replacement		
5. Seeding		
A. Seedbed Preparation		
B. Mulch		
C. Fertilizer		
D. Seed		
6. Other		

BOND INFORMATION:

- A. An updated bond estimate should be included, if required in the Division's approval of the Mining and Reclamation Plan (MRP) or if changes to the MRP have occurred, including a detailed itemization of actual/estimated reclamation costs as outlined in the RECLAMATION section above. The date of the release of revegetated areas from further responsibility for a partial bond release, if applicable, should also be included.

	<u>Amount</u>	<u>Type</u>	<u>Date Posted</u>
Present Bond			

Increased disturbance, if any:

Increased Bond Amount (attached reclamation estimate).

B. Bond release.

<u>Acres</u>	<u>Bond Amount Released</u>	<u>Date</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ADDITIONAL INFORMATION:

Supply any additional information as requested by the Division related to:

- (a) Permit stipulations (status).
- (b) Other special conditions (status).

APPENDIX I

ANNUAL REPORT MAPS

1. Maps must be clear and legible contour maps or recent aerial photos. The scale should be 1 inch = 500 feet to adequately show topographic features.
2. Map sheets should be of a reasonable size, not to exceed 48 inches on a side.
3. Maps must have a title block with:
 - A. Map title.
 - B. Name and address of permittee.
 - C. Permit and amendment numbers.
 - D. Annual report period.
 - E. Scale, north arrow, contour interval, date of photography, etc.
4. All maps must show:
 - A. Legal subdivisions.
 - B. Permit area boundary clearly shown and labelled.
 - C. Amendment areas clearly shown and labelled.
 - D. Contour features.
5. The following features should all be clearly identified:
 - A. Topsoil stockpiles (numbered and with volumes).
 - B. Settling ponds and sediment control structures.
 - C. Haul roads.
 - D. Pits identified by location, name, number, etc.
 - E. Ramps (numbered).
 - F. Out-of-pit spoil dumps.
 - G. All waste disposal sites including, but not limited to:
 1. Landfill sites.
 2. Carbonaceous waste dumps.
 - H. Diversion ditches.
 - I. Monitoring sites.
6. All areas to be affected by mining and reclamation in the coming year should be outlined and labelled.